

**A new species of freshwater crab of the genus *Strengeriana*
Pretzmann, 1971, from Colombia
(Crustacea: Decapoda: Pseudothelphusidae)**

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Abstract.—A new species of the genus *Strengeriana* Pretzmann, 1971, is described. With the addition of the new species, this genus now includes 15 species, distributed in the Sierra Nevada de Santa Marta, and the Western, Central and Eastern Cordilleras of the Colombian Andes, at altitudes ranging from 700 to 1800 m above sea level. The species are distinguished by morphological characteristics of the first male gonopod.

The genus *Strengeriana* Pretzmann, 1971, comprises a group of small pseudothelphusid crabs that inhabit mountain streams. The discovery of a new species of *Strengeriana*, described herein, raises the number of species in the genus to 15, all of which are distributed in the Sierra Nevada de Santa Marta, and the Western, Central and Eastern Cordilleras of the Colombian Andes, at altitudes ranging from 700 to 1800 m above sea level. The systematics and biogeography of the genus were reviewed by Rodríguez & Campos (1989), Campos & Rodríguez (1993), and Campos (1995). The new species was discovered in the collections of Museo La Salle, Santa Fé de Bogotá, Colombia (MLS). The abbreviations cb and cl stand for carapace breadth and carapace length, respectively.

Family Pseudothelphusidae Rathbun, 1893
Tribe Strengerianini Rodríguez, 1982
Genus *Strengeriana* Pretzmann, 1971
Strengeriana casallasi new species
Figs. 1–3

Holotype.—Vereda San Jerónimo, Municipio Casabianca, Tolima Department, Colombia, 1500 m alt., 1 Jun 1997, leg. R. Casallas: 1 male cl 14.6 mm, cb 23.5 mm (MSL 278).

Paratypes.—Same locality data as holotype: 1 male, cl 13.0 mm, cb 19.7 mm (ICN-MHN-CR 1711), 2 males, cl 12.3, 11.8 mm, cb 18.5, 17.6 mm, 3 females, cl range 11.2–12.0 mm, cb range 17.4–18.0 mm (MLS 279).

Diagnosis.—First male gonopod short, stout; mesial lobe forming crest, with 2 spines adjacent to mesial process; mesial process wide, lanceolate, with 4 strong spines on mesial border, bearing 5 less prominent spines on lateral border, and 1 bifid spine distally; cephalic lobe bearing strong conical process, a subtriangular, almost rounded, process, directed latero-caudally; with proximal, cephalic acute spine fused to mesial process, but with free tip.

Description of holotype.—Carapace (Fig. 1a) with wide, deep cervical groove curving posteriorly and not reaching lateral margin. Anterolateral margin with deep depression behind anteroexternal orbital angle, followed by papillae, and second shallow depression at level of cervical groove; rest of margin with papillae. Postfrontal lobes small, oval, delimited anteriorly by transverse depression; median groove absent. Surface of carapace in front of postfrontal lobes flat, inclined anteriorly. Upper border of front convex in dorsal view, marked with

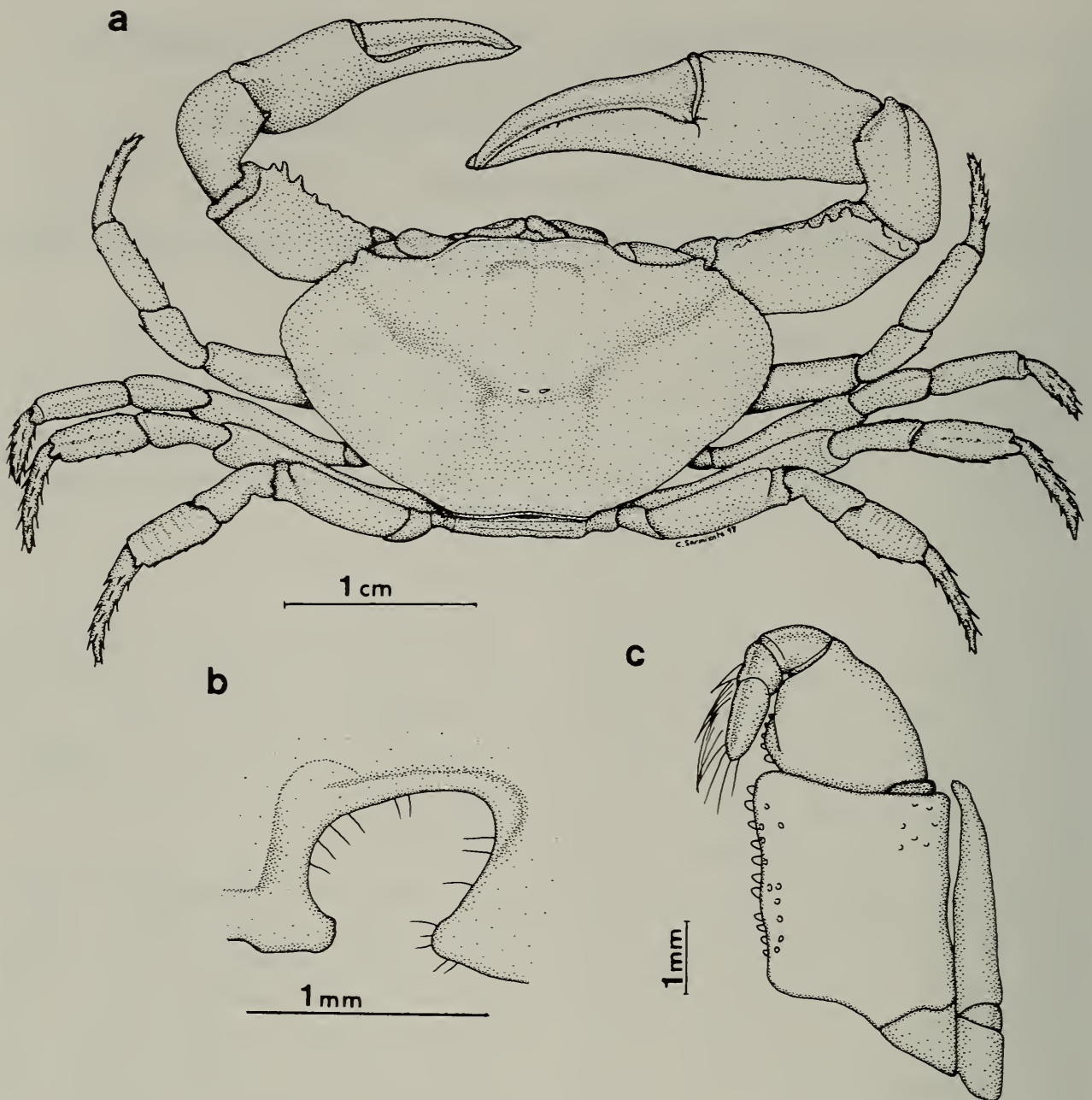


Fig. 1. *Strengeriana casallasi*, new species, holotype (MLS 278), a, dorsal view of carapace and pereopods; b, aperture of efferent channel; c, left third maxilliped external view.

row of tubercles; lower margin visible in dorsal view, strongly sinuous in frontal view, and with tubercles. Surface of front between upper and lower borders high and vertical. Upper and lower orbital margins each with row of tubercles. Dorsal surface of carapace covered with small papillae; limits between regions well demarcated. Merus of endognath of third maxilliped regularly recurved, with shallow depression on distal part of external margin; exognath overreaching lateral margin of ischium of third maxilliped (Fig. 1c). Orifice of effer-

ent branchial channel partially closed by spine at jugal angle and by extension of lateral lobe of epistome (Fig. 1b).

First pereopods heterochelous, right cheliped larger than left. Merus with 3 crests: upper crest with rows of tubercles, internal lower crest with rows of teeth, and external lower crest with few tubercles. Carpus with blunt distal spine. Palms of both chelipeds smooth, swollen. Fingers of chelae gaping when closed, tips crossing, and with rows of tubercles (Fig. 1a). Walking legs (second to fifth pereopods) slender, but not unusu-

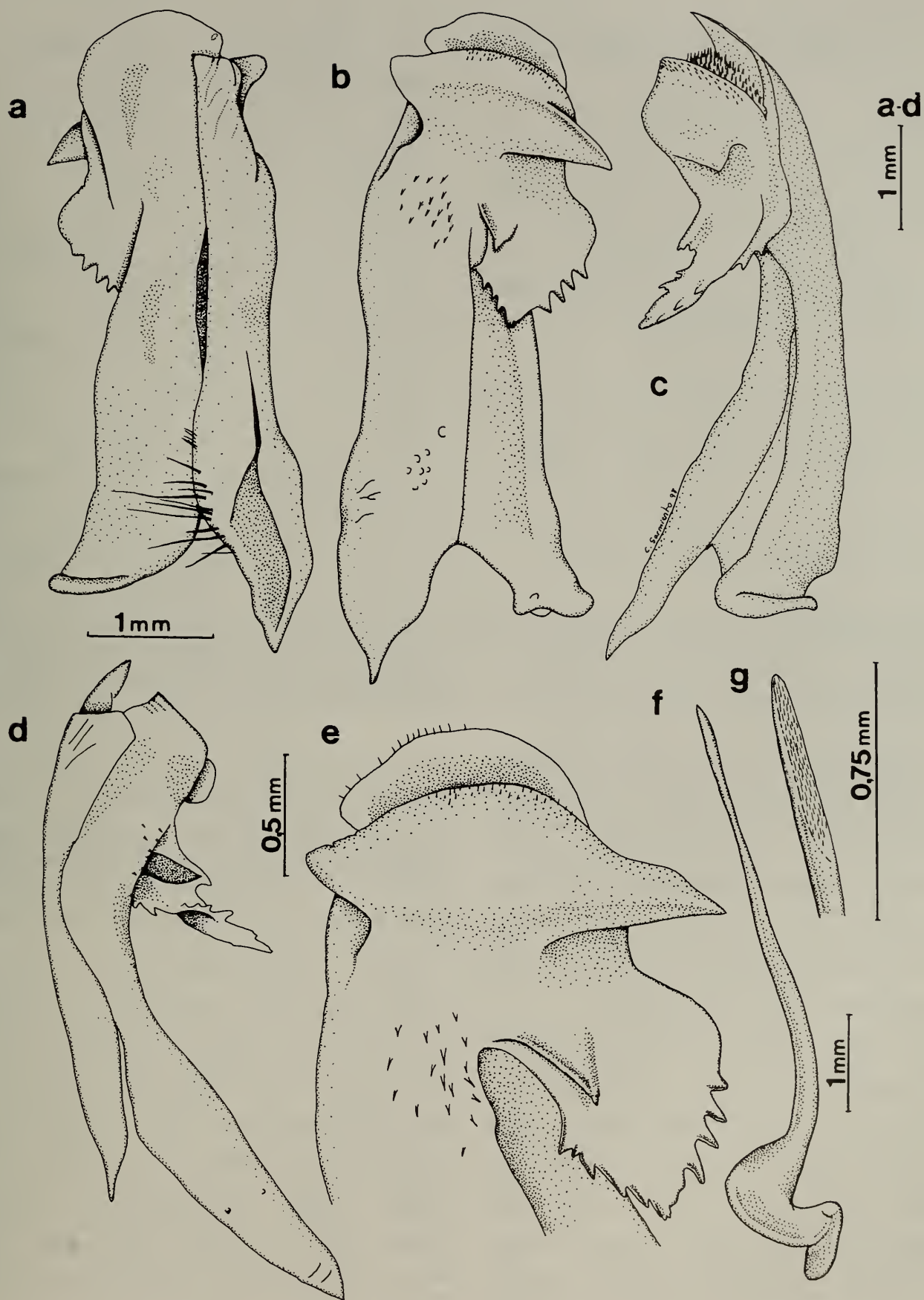


Fig. 2. *Strengeriana casallasi*, new species, holotype (MLS 278), left first gonopod: a, whole gonopod, caudal view; b, whole gonopod, cephalic view; c, whole gonopod, mesial view; d, whole gonopod, lateral view; e, apex, distal view. Left second gonopod: f, whole gonopod, caudal view; g, apex distal view.

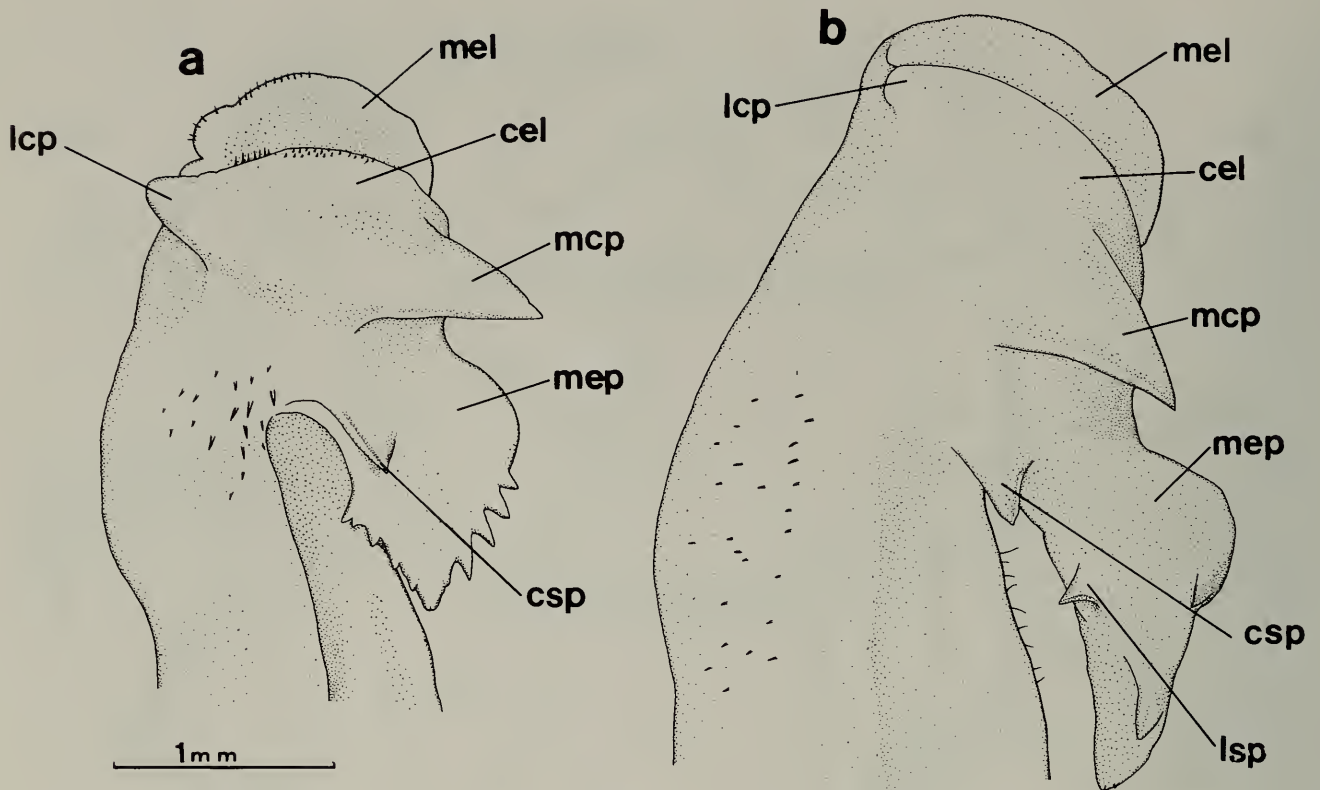


Fig. 3. *Strengeriana casallasi*, new species, holotype (MLS 278), left first gonopod: A, apex distal view; *Strengeriana manifoldis* Campos and Rodríguez, 1993, holotype (ICN-MHN-CR 0938), left first gonopod: B, apex distal view. Abbreviations: cel, cephalic lobe; csp, cephalic spine; lcp, lateral-cephalic process; lsp, lateral spine; mcp, mesial-cephalic process; mel, mesial lobe; mep, mesial process.

ally elongated, those of second to fifth pereopods each with 5 rows of large spines diminishing in size proximally, arrangement of spines on dactylus of left third pereopod as follows: anterolateral and anteroventral rows with 5 spines plus 3 intercalated papillae, external row with 5 spines plus 2 proximal papillae, posteroventral and posterolateral rows with 4 spines.

First male gonopod short, stout; mesial lobe forming crest, with 2 spines adjacent to mesial process (Fig. 2c, d); mesial process wide, lanceolate, with 4 strong spines on mesial border, bearing 5 less prominent spines on lateral border, and 1 bifid spine distally (Fig. 2a, b, c, d, e); marginal lobe simple, with long ridge on lateral surface; mesial lobe forming long slit with cephalic lobe where spermatic channel is located; cephalic lobe bearing strong conical process, (Fig. 2a, b, c, e), a subtriangular, almost rounded process directed latero-caudally (Fig. 2a, b, e), and proximal cephalic acute spine fused to mesial process, but

with free tip (Fig. 2b, c, d, e). Spermatic channel with rows of dark spines, and spinules on distal border of cephalic lobe. Caudal setae strong. Cephalic distal surface with rows of strong dark spines. Second male gonopod with spinules on distal portion, tip cup-shape (Fig. 2f, g).

Color (nomenclature after Smithe 1975).—Specimens preserved in alcohol are dark brown (near 223A, Mars Brown), with olive-brown specks on the dorsal side of carapace. The walking legs are paler brown (Verona Brown, 223B) dorsally, and reddish-brown (Tawny, 38) ventrally. The chelae are paler brown (Verona Brown, 223B) dorsally, and buffy-brown (Sayal Brown, 223C) ventrally. The ventral surface of the carapace is buffy-brown (Sayal Brown, 223C).

Etymology.—The species is named in honor of Hermano Roque Casallas, who collected the specimens.

Remarks.—This species is similar to *Strengeriana manifoldis* Campos & Rod-

ríguez, 1993. The two can be distinguished by features of the first male gonopod. The mesial process (Fig. 3a, mep) in *S. casallasi* is wide, lanceolate, with four strong spines on the mesial border, five less prominent spines on the lateral border, one bifid spine distally, and shows a torsion of 90° relative to *S. maniformis*. The mesial process (Fig. 3b, mep) in *S. maniformis* is longer, oblong, with a strong distal spine, followed proximally by a series of spines, diminishing in size, and a slender spine (Fig. 3b, 1sp) located near the middle of the lateral surface of the process (the last absent in *S. casallasi*). The cephalic lobe (Fig. 3a, cel) in *S. casallasi* shows a subtriangular, almost rounded process (Fig. 3a, 1cp) directed latero-caudally, and a proximal acute cephalic spine (Fig. 3a, csp) fused to the mesial process. In *S. maniformis*, the subtriangular process (Fig. 3b, 1cp) on the lateral side of the gonopod is vestigial, and the proximal cephalic spine (Fig. 3b, csp) is well separated from the mesial process.

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Literature Cited

- Campos, M. R. 1995. A new species of freshwater crab of the genus *Strengeriana* from Colombia (Crustacea: Decapoda: Pseudothelphusidae).—Proceedings of the Biological Society of Washington 108:98–101.
- , & G. Rodríguez. 1993. Three new species of *Strengeriana* from Colombia (Crustacea: Decapoda: Pseudothelphusidae).—Proceedings of the Biological Society of Washington 106:508–513.
- Pretzmann, G. 1971. Fortschritte in der Klassifizierung der Pseudothelphusidae.—Anzeiger der Mathematisch Naturwissenschaftliche Klasse der Österreichischen Akademie der Wissenschaften (1) 179(1–4):14–24.
- Rathbun, M. 1893. Descriptions of new species of American freshwater crabs.—Proceedings of the United States National Museum 16(959): 649–661, p1. 73–77.
- Rodríguez, G. 1982. Les crabes d'eau douce d'Amérique. Famille des Pseudothelphusidae.—Faune Tropicale 22:1–223.
- , & M. R. Campos. 1989. Cladistic relationships of fresh-water crabs of the tribe Strengerianini (Decapoda: Pseudothelphusidae) from the Northern Andes, with comments on their biogeography and descriptions of new species.—Journal of Crustacean Biology 9:141–156.
- Smithe, F. B. 1975. Naturalist's color guide. The American Museum of Natural History, New York. Part 1: unnumbered pages.